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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,685	03/15/2004	Takashi Ito	5241-0107PUS1	8648

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EXAMINER	
PIERY, MICHAEL T	

ART UNIT	PAPER NUMBER
1791	

NOTIFICATION DATE	DELIVERY MODE
04/01/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/799,685	ITO ET AL.	
	Examiner	Art Unit	
	MICHAEL T. PIERY	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 March 2008* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as obvious over Kawakita (JP 2002-096344) in view of Kawakita II (JP 2002-096332 – citations refer to English translation provided by applicant).

Regarding claim 1, Kawakita teaches a method comprising the steps of: designing and making, according to the optimized form of the optical device, a temporary molding die for molding the optical device (Paragraph 0020); molding a first temporary optical device by using the temporary molding die (Paragraph 0023); measuring a wavefront aberration of thus molded first temporary optical device and calculating the aberration amount (0024); calculating a correction wavefront aberration compensating for the wavefront aberration (Paragraph 0027); designing by using at least the plurality of optical parameters a second temporary optical device for optimizing a form so as to exhibit the correction wavefront aberration (Paragraph 0033); and designing, according to the optimized form of the second temporary optical device, a normal molding die for molding a normal optical device (Paragraph 0033 and Paragraph 0023). Kawakita II teaches it is known to design an optical device, evaluate the device for wavefront aberrations (paragraphs 0023-0024) and calculate a correction wavefront aberration amount (paragraph 0033). Kawakita II uses an optical simulation and evaluation to calculate the correction wavefront aberration amount not a table prepared beforehand. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Kawakita to calculate the correction wavefront aberration amount using optical simulation and evaluation because it has been held that substitution of known equivalent calculation methods is within routine skill of one in the art (MPEP 2144.06).

Regarding claim 2, Kawakita teaches a method according to claim 1, as discussed above, further comprising the steps of: molding the normal optical device by using the normal molding die (Drawing 1); measuring a wavefront aberration of thus molded optical device (Paragraph 0024); and recalculating the correction wavefront aberration when the wavefront aberration has a

value greater than a predetermined reference value (Paragraph 0027), and repeating subsequent steps until the value of the correction wavefront aberration becomes the reference value or less (Drawing 2).

Regarding claim 3, Kawakita teaches a method according to claim 1, as discussed above, wherein the wavefront aberration correction and wavefront aberration are measured by using an interferometer apparatus for measuring a transmitted wavefront (Paragraph 0024). Kawakita discloses using transmitted wave side measurement; this type of measurement is the function of an interferometer.

Regarding claim 4, Kawakita teaches a method according to claim 1, as discussed above, wherein a plurality of wavefront aberration amounts are measured in a plurality of divided areas, respectively, and respective correction wavefront aberration amounts are calculate for thus measured plurality of wavefront aberration amounts (Paragraph 0024).

Regarding claim 5, Kawakita teaches a method according to claim 1, as discussed above, wherein at least one surface of the optical device is an aspheric surface (Paragraph 0020).

Regarding claim 6, Kawakita teaches a method according to claim 1, as discussed above, wherein the optical device is a single lens, used for an optical pickup objective lens, having aspheric surfaces on both sides (Paragraph 0002).

Regarding claim 7, Kawakita teaches a method according to claim 1, as discussed above, wherein the molding die is used for pres molding or injection molding (Paragraph 0038).

Response to Arguments

Applicant's arguments filed November 20, 2009 have been fully considered but they are not persuasive.

Applicant argues that Kawakita II does not design an optical device for optimizing a form so as to exhibit a wavefront aberration with the correction wavefront aberration. The examiner disagrees. Kawakita II teaches designing an optical device (paragraph 0027 of attached translation) for optimizing a form so as to exhibit a wavefront aberraion (paragraph 0029) with the correction wavefront aberration (paragraph 0028)

Applicant argues that Kawakita II does not use wavefront aberration as an input and thus does not meet the limitations of claim. The examiner disagrees. The claim requires that the form is optimized using a corrected wavefront aberration amount. Kawakita II uses a corrected wavefront aberration amount ("reverse irregularity" paragraph 0028) when forming the optimized mold (paragraph 0029).

Applicant argues that Kawakita II uses a table. The examiner disagrees. Nowhere in the described process is the corrected wavefont used in a table for designing a second temporary optical device. Paragraph 0033 discusses that the results of the spherical aberration are displayed in the table. Claim 1 requires that the table used does not display a relationship between deviation of the wavefront aberration amount and the deviation of the optical parameter. Kawakita II's table only displays spherical aberration values.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL T. PIERY whose telephone number is (571)270-5047. The examiner can normally be reached on M-Th 8:30-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael T Piery/
Examiner, Art Unit 1791

/Monica A Huson/
Primary Examiner, Art Unit 1791